



## The Importance Of Probiotics

Probiotics are helpful for total wellness since gut health is connected to brain health, immune functionality, weight management, and much more. The two most popular strains are Lactobacillus and Bifidobacteria.

*How do you decide on which strain to take?*

Here's some information on the most popular probiotic strains.

Lactobacillus is a gram-positive, non-spore-forming bacteria and the most well-known probiotic, perhaps since it's added to many yogurts. Lactobacillus accounts for about 0.01% of the total bacterial count in the gut. Lactobacillus can support gut barrier function by removing the potentially harmful bacteria. There are approximately 170 different species of Lactobacillus, and the health benefits are:

- Supporting the digestion of lactose or milk sugar
- Healthy digestion and bowel regularity
- Working on healthy total cholesterol levels
- Boosting immune function
- Promoting sleep

Bifidobacteria, gram-positive anaerobic bacteria, help you digest carbohydrates. Bifidobacteria make up approximately 3 to 6% of the total gut microbiome, making it one of the most abundant. There are 48 different Bifidobacterium species, and each affects your health in different ways. In general, the health benefits associated with Bifidobacteria include:

- A healthy immune function
- A better physiological response to stressors
- Healthy digestion and alleviation of digestive symptoms like bloating and constipation
- Mood regulation

**Bifidobacterium lactis** promotes regularity and provides relief from constipation.

**Bifidobacterium longum** stimulates the immune response and promotes microbial balance by crowding out harmful bacteria that cause discomfort and neutralizing everyday toxins in the gut. Aids production and absorption of B vitamins blocks harmful invaders, boosts the immune system, and helps maintain regularity. It helps break down carbs without producing excess gas. May help prevent or



minimize various allergies or allergic reactions, inflammation associated with Crohn's disease, or colitis. It may have a positive impact on cholesterol levels. Lowers the pH of the intestine/vagina to inhibit the growth of harmful bacteria. Recent studies have also shown this strain to be beneficial in supporting a balanced mood and healthy management of stress and anxiety.

**Bifidobacterium bifidum** live in the large intestine and vagina and adhere themselves to the walls of each, thus preventing harmful bacteria from colonizing. B. Bifidum also produces substances that lower the pH of their environment so harmful bacteria cannot thrive and enhance the assimilation of minerals.

**Bifidobacterium animalis or Bifidus regularis** may shorten colon transit time, promoting regularity and alleviating constipation.

**Bifidobacterium longum** promotes bacterial balance in the gut, supports the immune system, and alleviates digestive issues.

**Bifidobacterium lactis** and Lactobacillus acidophilus reduce the severity of symptoms, like bloating, in adults with IBS (irritable bowel syndrome). Bifidobacterium lactis might increase stool frequency and improve stool consistency, which can help improve constipation and promote bowel regularity.

**Bifidobacterium infantis** is excellent for both children and adults; B. infantis is one of the first colonized in the newborn's digestive tract. It helps impede the growth of harmful bacteria and strengthens the producer of B vitamins. Reports state that it's good with IBS (bloating, gas, diarrhea, constipation, urgency, and abdominal discomfort), IBD, ulcerative colitis, and traveler's diarrhea.

Bifidobacterium breve competes against harmful bacteria due to the large variety of molecules it can digest (including plant fibers otherwise thought non-digestible). It is shown to inhibit E. coli. Present in the intestines and the vagina (inhibits the growth of Candida Albicans, the primary cause of yeast infections). Decreases occurrence of gas, diarrhea, and bowel irritations.



*Lactobacillus acidophilus* is the most commonly used probiotic. It lives in the mouth, intestines (maintains the integrity of the small intestine wall, aiding nutrient absorption and supporting immunity), and vagina (adheres to the vagina and urinary system walls where it can fight infection). It helps synthesize vitamin K and many antimicrobial substances, giving it antibiotic properties.

**Lactobacillus casei** helps control diarrhea, has potent anti-inflammatory effects on the GI, and aids in relieving antibiotic-associated diarrhea. Produces lactic acid to lower the pH of the gut, impeding the growth of harmful bacteria. It lives in the mouth and intestines of both infants and adults. *Lactobacillus casei* inhibits the growth of *Helicobacter pylori* and *Staphylococcus aureus*, two pathogenic bacteria well known for causing human infection and resulting health problems.

**Lactobacillus rhamnosus** and **Lactobacillus fermentum** can help restore normal vaginal flora and reduce the risk of bacterial and yeast vaginal infections.

*Lactobacillus rhamnosus* GG combating antibiotic-associated diarrhea and traveler's diarrhea. It lives in the intestines and fights gut and urinary tract infections. Assists in dairy digestion and lactose intolerance. *Lactobacillus rhamnosus* positively affects GABA, a neurotransmitter in the brain, and may reduce stress-related symptoms.

**Lactobacillus reuteri**, *Lactobacillus reuteri*, and *Lactobacillus acidophilus* can promote healthy cholesterol levels and support heart health. *Lactobacillus reuteri* provides strong protection against infection and helps maintain a healthy immune system. Treats and prevents diarrhea and helps relieve colic. Releases a substance capable of killing bacteria, yeast, and fungi, making it popular for vaginal infection support against candida UTIs.

**Lactobacillus plantarum** can improve gas and flatulence in people with irritable bowel syndrome.

**Lactobacillus helveticus** exerts antimicrobial activities against pathogens, helps reduce symptoms of lactose intolerance by breaking down lactose, helps to prevent and reduce diarrhea, may have implications on lowering cholesterol and blood pressure, and help with calcium absorption. Recent studies have also shown this strain to be beneficial in supporting a balanced mood and healthy management of stress and anxiety. It lives in the intestines.

**Saccharomyces boulardii** is a probiotic yeast resistant to stomach acids and antibiotics. Effective against reducing acute diarrhea in children and adults. It protects against both antibiotic and travelers' induced diarrhea. It promotes immune and digestive health. After a while, you should stop taking this one.



I do not recommend **Streptococcus thermophilus**, the most valuable strain in the commercial food industry and the starter strain for making yogurt (used in making cheeses). Ferments milk sugar (lactose) that turns into lactic acid, which effectively prevents lactose intolerance and lowers the pH of the yogurt, avoiding the growth of harmful bacteria causing food poisoning. Keeps microflora of intestines balanced.

When a probiotic contains Inulin, it also has a prebiotic since Inulin is prebiotic. It's not digested or absorbed in the stomach. It stays in the bowel and helps certain beneficial bacteria to grow. Prebiotics are a source of food for your gut's healthy bacteria. They're carbs your body can't digest. So they go to your lower digestive tract, where they act as food to help the healthy bacteria grow. If you take a prebiotic supplement, start slowly (once a day) until you see how your body reacts to the supplement. If gas or bloating occurs, then cut your dose in half.

*You can also get prebiotics from the following foods:*

Apples  
Artichokes  
Asparagus  
Bananas  
Barley  
Berries  
Chicory  
Cocoa  
Dandelion greens  
Flaxseed  
Garlic  
Green vegetables  
Leeks  
Legumes (peas and beans)  
Oats  
Onions  
Tomatoes  
Yacon root



### **Research on benefits of probiotics:**

Here are just a few reasons and research why we should explore daily probiotic supplementation. The research concluded that probiotics help with seizures. I see the same pattern on functional medicine testing. The researchers determined that brain levels of GABA were increased relative to glutamate by the bacteria, and thus the probiotic helped.

Another research shows probiotics help with mental illness in traumatized kids. Found that the connection between the brain and gut and the bacteria in the gut might be vital to consider when understanding emotional functioning following adverse experiences.

Additional research shows that probiotics significantly reduce mild to moderate depression symptoms, offering hope of safe and highly tolerable treatment.

More research shows that therapies based on modulation of the gut microbiome with drugs or probiotics could emerge as new approaches to treating Alzheimer's.

Another research states that some probiotics are linked to weight gain and weight loss depending on which beneficial strains were abundant or deficient.

Another research shows chronic opioid use can lead to adrenal insufficiency through central suppression of the hypothalamic-pituitary-adrenal axis. Once again, GI is compromised, and Yes, I see this pattern.

Probiotics are my favorite supplements to take, and I never leave home without them. I always recommend a high-quality probiotic not sourced with milk, soy, maize, or maltodextrin. Remember to start slowly when you first introduce a probiotic, as your body may need time to shift the ratio of good and bad bacteria.

Do your research and get your medical practitioner's approval before implementing any new supplement regime.

Are you worth it? I think YOU are!



## **Probiotic Options:**

For infants and children:

For Weight mgmt: Ther-Biotic® Metabolic Formula designed to increase intestinal diversity and support healthy metabolism and weight management.

For over 60: Ther-Biotic® Senior Formula is a synergistic blend of 10 probiotic species, in a base of Inulin, designed to support a balanced and diverse microbiota, normal gastrointestinal and immune function for individuals over 60.

If you only want Bifidus: Ther-Biotic® Factor 4 is a concentrated Bifidobacterium formulation in a base of Inulin. It has four species; each capsule provides 10 billion CFU protected by our proprietary InTactic® technology for maximum viability throughout the intestinal tract.

If you only want Lactobacillus, Ther-Biotic® Factor 1 is a concentrated, 20 billion CFU Lactobacillus rhamnosus strain in an inulin base. An extensively researched species, L. rhamnosus, has been recognized for robust L(+) lactic acid production and immune support.

If you want both Bifidus and Lacto you can choose from the following:

**VITAL-PLEX®**

Helps rebalance GI microbiota with four hardy species†

This balanced blend of 4 probiotic species with 5 billion CFUs used where undesirable organisms invade and multiply in the bowel.

Pro-biotic-complex contains two important species supporting the small and large intestine. Equal amounts of Lactobacillus acidophilus and Bifidobacterium bifidum combined in Pro-Biotic Complex™ for individuals who need higher amounts of these two primary resident microorganisms.

For extra protection: BioSpora™ is a potent blend of genetically certified Bacillus coagulans and B. subtilis species formulated to provide exceptional probiotic support for healthy gastrointestinal and immune function. The spores are resistant to extremes of heat, ultraviolet radiation, solvents, hydrogen peroxide, and enzymes. The spores withstand stomach acid and germinate in the small intestine



within 6 hours of ingestion. Ingested *B. coagulans* and *B. subtilis* reside in the human GI tract for up to 7 days following consumption. BioSpora™ for enhanced support of normal GI and immune function.

**LactoPrime Plus:** This broad-spectrum, 12-strain blend of 7 *Lactobacillus* and 5 *Bifidobacterium* species is in a base of purified plant cellulose. This formula is free of Inulin and other prebiotics and polysaccharides, making it suitable for dietary restrictions.

**Ther-Biotic® Synbiotic** is a next-generation, hypoallergenic, non-GMO, vegetarian, USA-manufactured, shelf-stable combination of clinically demonstrated probiotics with the low-FODMAP™ certified prebiotic SunFiber®. Designed to expand upon the beneficial effects of our celebrated Ther-Biotic® line, this synergistic blend of seven targeted probiotics and a prebiotic SunFiber® leverage new research and cutting-edge functionality to provide a more profound entourage effect on GI ecology than probiotics or prebiotics alone. With 50 billion CFU per capsule and strain identification for optimal transparency, Ther-Biotic® Synbiotic addresses unique GI requirements, ensuring comprehensive microbiome and immune support suitable for any individual, from the healthiest to the most sensitive.

**BiotaGen®** is a distinctive formulation of soluble dietary fiber with prebiotic activities that stimulate the growth of colonic populations of beneficial bacteria and enhance gastrointestinal and systemic immune function.†BiotaGen® combines chicory inulin with the immunomodulating actions of larch arabinogalactan and purified yeast beta-glucan. Chicory-derived inulin is an inulin-type fructan best known for its ability to sustain increases in populations of *Bifidobacterium*, *Lactobacillus*, and *Eubacterium*, an essential butyrate-producing species indigenous to the bowel. By escaping digestion and absorption in the small intestine, inulin-type fructans arrive largely intact in the colon, where they selectively feed beneficial gut microbiota. In addition, inulin-type fructans promote normal colon transit times, enhance absorption of calcium and magnesium, favorably modulate lipid levels, support gut mucosal barrier and immune function, regulate intestinal epithelial cell growth, and reduce the number of potentially undesirable bacterial species. Arabinogalactan, a polysaccharide derived from the Western Larch tree, is a highly soluble dietary fiber that enhances immune function by promoting cytokine production and increasing the number of natural killer cells. Indigestible by human enzymes, arabinogalactan exerts prebiotic properties,





including the ability to stimulate *Lactobacillus* species selectively. Arabinogalactan is metabolized to short-chain fatty acids (acetate, butyrate, and propionate) and reduces ammonia production. Beta-glucan, a glucose polysaccharide prebiotic fiber, has broad, beneficial effects on immune function by enhancing monocytes and macrophages. Beta-glucan stimulates immune responses to a broad spectrum of fungal and undesirable microorganisms. BiotaGen® supports optimal gastrointestinal function, promotes populations of healthful colonic bacteria, and enhances gastrointestinal and systemic immune function.† BiotaGen® works synergistically with probiotics to assure intestinal microbiota balance.

Factor 6 is the Ultra-strength, 100 billion CFU probiotic formula.

### **Enzymes:**

V-Nzyme Blend™ is a blend of microbial-derived enzymes active over a wide pH range with enzyme activity specific to fat, protein, carbohydrate (starch), and cellulose. Cellulase helps break down dietary fiber and alpha-galactosidase to target complex carbohydrates found in common gas-forming foods. Together, the enzymes in this combination help make legumes, vegetables, and grains more digestible therefore helping to prevent occasional discomfort from gas and bloating.

SIBB-Zymes™ include an active enzyme blend of peptidase and protease with dipeptidyl peptidase IV (DPP-IV) activity. Peptidase and protease enzymes help break down plant and animal proteins, including casein (milk/dairy products), gluten (wheat, rye, oats, barley, and other grains), and soy. Peptidase enzymes expressing DPP-IV activity are especially effective in breaking down proline-rich exorphin (opiate-acting) peptides derived from incompletely digested casein, gluten, and soy that may influence the central nervous system function in some individuals. SIBB-Zymes™ can help break down dietary disaccharides and oligosaccharides, including lactose. Various genetic and acquired factors can disrupt the small intestine brush border, resulting in the low activity of brush border enzymes. SIBB-Zymes™ supplies a blend of enzymes typically found in the small intestinal brush border that are critical for the final steps of carbohydrate and protein digestion. Disaccharide enzymes (lactase, maltase, and sucrase) are supplied together with glucoamylase to assist optimal cleaving of sugars and carbohydrates that, if left undigested, may affect absorption and microbial fermentation, contributing to a shift in the balance of yeast and bacteria.





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